DNR USE ONLY	Con 10-1 Initials:
	Facility No:
	CP / CI Doc. date

IOWA DEPARTMENT OF NATURAL RESOURCES
AIR QUALITY BUREAU

REGISTRATION FOR
STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES
LESS THAN 400 BRAKE HORSEPOWER

Instructions: Completion of this form is intended to allow facilities to qualify for an exemption from the requirement to obtain an air construction permit, and is also intended to assist facilities in complying with federal New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP). Only facilities meeting all of the following conditions may use this form:

- The facility owner or operator is planning to install, modify, or reconstruct a stationary compression ignition internal combustion engine (CI engine) [(1)] that is rated less than 400 brake horsepower (bhp) **after** March 18, 2009.
- The facility owner or operator is choosing to use the 400 bhp exemption for the CI engine [567 Iowa Administrative Code (IAC) 22.1(2)"r"]. Alternatively, the owner or operator must apply for an air construction permit for the CI engine as specified in 567 IAC 22.1(1), or must qualify for another exemption. An owner or operator planning to install, modify, or reconstruct a CI engine greater than or equal to 400 bhp must obtain a construction permit unless otherwise exempt, and may also be subject to NSPS and NESHAP requirements.
- The facility is not located in Linn or Polk Counties.

[(1)] *CI engine* is a compression ignition engine that is a stationary internal combustion engine (ICE). A diesel engine is a compression ignition engine. A CI engine is not a spark ignition engine.

If your facility meets the conditions above, prior to installing the CI engine, submit a completed registration form for each CI engine to: NSPS/NESHAP Coordinator, DNR Air Quality Bureau, 7900 Hickman Road, Suite 1, Urbandale, Iowa 50322. ***Retain a copy of the completed form for your records. The registration becomes effective upon the DNR's receipt of this signed registration.***

Section 1 – Facility Information

Name of Firm/Company:	Facility Name (if different):	Facility Number (if known):

Equipment Location - Street:	City:	State:	Zip:

Mailing Address (if different):	City:	State:	Zip:

Person to Contact:	Phone number:	Email (if available):

Section 2 – Applicability Determination

New Source Performance Standards (NSPS) - 40 Code of Federal Regulations (CFR) Part 60, Subpart IIII: Facility Applicability Questions *(The provisions of this subpart are not applicable to CI engines being tested at a stationary test cell/stand.)*

Emission Unit Number:	**Description of Emission Unit:**

1. Is this engine a portable engine that meets the definition of a nonroad engine in 40 CFR 1068.30?
   (A portable engine that will remain at a location more than 12 months or a portable engine that operates more than 3 months per year as part of a seasonal source that returns to the same location is considered a stationary engine. Please contact the Air Quality Bureau if you are unsure if the portable engine should be considered a stationary engine or a nonroad engine.)
   ☐ No. Go to question 2.
   ☐ Yes. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration.

2. Has this engine been modified or reconstructed after July 11, 2005?
   (A modification is a physical or operational change that can increase the emissions of a regulated air pollutant. Reconstruction is replacing the components on an existing engine and the cost of the replacement components exceeds 50% the cost of a new engine. See 40 CFR 60.14 and 60.15 for complete definitions.)
   ☐ No. Go to question 3.
   ☐ Yes. This engine is subject to Subpart IIII. A modified or reconstructed engine must meet the emissions standards for the model year of when the engine was originally built. If the modification or reconstruction occurred after March 18, 2009, fill out the Engine Data section, read Sections 3 & 4 of this form, sign and date Section 5 and submit to the DNR.

3. Is this engine an NFPA (National Fire Protection Association) certified fire pump engine?
   (*Fire pump engine* is an emergency stationary ICE certified to NFPA requirements that is used to provide power to pump water for fire suppression or protection.)
   ☐ No. Go to question 5.
   ☐ Yes. Continue to question 4.

4. Was the fire pump engine manufactured after July 1, 2006?
   ☐ No. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration.
   ☐ Yes. This fire pump engine is subject to Subpart IIII. Fill out the Engine Data section, read Sections 3 & 4 of this form, sign and date Section 5 and submit to the DNR.

5. Was the engine manufactured after April 1, 2006?
   ☐ No. Stop, this engine is not subject to Subpart IIII. You do not need to submit this registration.
   ☐ Yes. This engine is subject to Subpart IIII. Fill out the Engine Data section, read Sections 3 & 4 of this form, sign and date Section 5 and submit to the DNR.

Engine Data

Date of construction: *(The date of construction is the date the engine was ordered by the owner or operator.)*		
Has this engine been modified or reconstructed? **Yes** ☐ **No** ☐	If yes, please state the date:	
Is this engine an emergency engine [(2)]? **Yes** ☐ **No** ☐	Engine Manufacturer:	
	Model year [(3)]:	Brake horsepower (bhp):

[(2)] *Emergency stationary internal combustion engine* is a stationary ICE whose operation is limited to emergency situations and required testing and maintenance. Examples include stationary ICE used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary ICE used to pump water in the case of fire or flood, etc. Stationary CI ICE used to supply power to an electric grid or that supply power as part of a financial arrangement with another entity are not considered to be emergency engines.

[(3)] *Model year* is either: (1) the calendar year in which the engine was originally produced, or (2) the annual new model production period of the engine manufacturer if it is different than the calendar year. This must include January 1 of the calendar year for which the model year is named. It may not begin before January 2 of the previous calendar year and it must end by December 31 of the named calendar year. For an engine that is converted to a stationary engine after being placed into service as a non-road or other non-stationary engine, model year means the calendar year or new model production period in which the engine was originally produced.

Section 3 – NSPS Requirements

Emission Standards for Owners and Operators

- 2007 and later model year engines must be certified by the manufacturer to comply with the emission standards of Subpart IIII. These standards are summarized in the appendix to this form, Tables B, C, and D.

Fuel Requirements for Owners and Operators

- Beginning October 1, 2007, engines must use a fuel that meets the following: 1) a maximum sulfur content of 500 ppm and 2) either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.
- Beginning October 1, 2010, engines must use a fuel that meets the following: 1) a maximum sulfur content of 15 ppm and 2) either a minimum cetane index of 40 or a maximum aromatic content of 35 percent by volume.

Emergency Engine Requirements for Owners and Operators

- Owners and operators of an emergency CI engine must install a non-resettable hour meter prior to start-up of the engine.
- The engine may be operated for the purpose of maintenance checks and readiness testing a maximum of 100 hours/year. There is no time limit on use for emergency situations.
- Operation other than for emergency operation and maintenance checks and readiness testing as permitted is prohibited.
- Owners and operators of an emergency engine must keep records of all operation of the engine. The owner must record the date and time of operation of the engine and the reason the engine was in operation.

Summary of Compliance Requirements for Owners and Operators

- Owners and operators must meet the applicable emission standards listed in the appendix to this form. The engine must be installed and configured according to the manufacturer's specifications.
- Owners and operators must operate and maintain the CI engines according to manufacturer's written procedures for the life of the engine to maintain compliance with the emission standards.
- Owners and operators of pre-2007 model year CI engines or fire pump engines manufactured prior to the model year specified in Table E of the appendix to this form must comply with the emission standards in either Table A or Table D of the appendix. Compliance must be demonstrated according to one of the following methods:
    1. Purchase an engine certified according to 40 CFR Part 89 or 40 CFR Part 94, as applicable, for the same model year and maximum engine power.
    2. Keep records of performance test results for each pollutant for a test conducted on a similar engine. The test must have been conducted using the same methods specified in Subpart IIII.
    3. Keep records of engine manufacturer data indicating compliance with the standards.
    4. Keep records of control device vendor data indicating compliance with the standards.
    5. Conduct an initial performance test to demonstrate compliance with the emission standards according to the requirements specified in 40 CFR 60.4212 as applicable.
- Owners and operators of CI fire pump engines that are manufactured in or after the model years specified in Table E of the appendix to this form must comply with the emission standards in Table D of the appendix by purchasing an engine certified to the applicable emission standards for the same model year and engine power. The engine must be installed and configured according to the manufacturer's specifications.

Section 4 – NESHAP Requirements

A stationary compression ignition internal combustion engine that is installed, modified, or reconstructed after June 12, 2006, shall comply with the requirements of 40 CFR Part 63, Subpart ZZZZ by complying with the NSPS requirements of 40 CFR Part 60, Subpart IIII. There are no further requirements for such engines.

Section 5 – Disclaimer and Facility Certification

Summaries and other statements in this registration form and its appendix are intended solely as guidance, cannot be used to bind the agency, and are not a substitute for reading applicable statutes, rules and regulations (including, but not limited to, 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ.) The federal regulations referenced in this form are available on-line at http://ecfr.gpoaccess.gov.

CERTIFICATION
"I certify that the stationary compression ignition internal combustion engine identified in this completed registration form meets the permit exemption requirements of paragraph 567 Iowa Administrative Code (IAC) 22.1(2)"r," and that this engine is in compliance with the requirements of 40 CFR Part 60, Subpart IIII and 40 CFR Part 63, Subpart ZZZZ. This certification is based on information and belief formed after reasonable inquiry, and the statements and information in the document are true, accurate, and complete."

Signature	Date Signed
Print Name	Title

Appendix to DNR CI Engine Registration Form (DNR Form 542-0590)

Compression Ignition Engines (Diesel Engines) Emission Standards 40 CFR Part 60, Subpart IIII

Table A. Emission Standards for Pre-2007 Model Year Engines: Non-Emergency Engines and Emergency Engines that are not Fire Pump Engines
(based on Table 1 to subpart IIII)

Limits in grams/kW-hr (grams/HP-hr)

Maximum Engine Power	NMHC1 + NOx	Hydrocarbons	Oxides of Nitrogen (NOx)	Carbon Monoxide (CO)	Particulate Matter (PM)
kW < 8 (HP < 11)	10.5 (7.8)			8.0 (6.0)	1.0 (0.75)
8 ≤ kW < 19 (11 ≤ HP < 25)	9.5 (7.1)			6.6 (4.9)	0.80 (0.60)
19 ≤ kW < 37 (25 ≤ HP < 50)	9.5 (7.1)			5.5 (4.1)	0.80 (0.60)
37 ≤ kW < 130 (50 ≤ HP < 175)			9.2 (6.9)		
130 ≤ kW < 300 (175 ≤ HP < 400)		1.3 (1.0)	9.2 (6.9)	11.4 (8.5)	0.54 (0.40)

[1] Non-methane hydrocarbons

Table B. Emission Standards for 2007 Model Year and Later Non-Emergency Engines
(based on 40 CFR 89.112 and 40 CFR 1039.101)

Limits in grams/kW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	NMHC	NOx	CO	PM
kW < 8 (HP < 11)	2007	7.5 (5.6)	--------	--------	8.0 (6.0)	0.80 (0.60)
	2008+					0.40 (0.30)
8 ≤ kW < 19 (11 ≤ HP < 25)	2007	7.5 (5.6)	--------	--------	6.6 (4.9)	0.80 (0.60)
	2008+					0.40 (0.30)
19 ≤ kW < 37 (25 ≤ HP < 50)	2007	7.5 (5.6)	--------	--------	5.5 (4.1)	0.60 (0.45)
	2008-2012					0.30 (0.22)
	2013+	4.7 (3.5)				0.03 (0.02)
37 ≤ kW < 56 (50 ≤ HP < 75)	2007	7.5 (5.6)	--------	--------	5.0 (3.7)	0.40 (0.30)
	2008-2012					0.30 (0.22)
	2013+	4.7 (3.5)				0.03 (0.02)
56 ≤ kW < 75 (75 ≤ HP < 100)	2007	7.5 (5.6)	--------	--------	5.0 (3.7)	0.40 (0.30)
	2008-2011	4.7 (3.5)				
	2012-2013	--------	0.19 (0.14)	0.40 (0.30)		0.02 (0.01)
	2014+					
75 ≤ kW < 130 (100 ≤ HP < 175)	2007	4.0 (3.0)	--------	--------	5.0 (3.7)	0.30 (0.22)
	2008-2011					
	2012-2013	--------	0.19 (0.14)	0.40 (0.30)		0.02 (0.01)
	2014+					
130 ≤ kW < 300 (175 ≤ HP < 400)	2007-2010	4.0 (3.0)	--------	--------	3.5 (2.6)	0.20 (0.15)
	2011-2013	--------	0.19 (0.14)	0.40 (0.30)		0.02 (0.01)
	2014+	--------				

Table C. Emission Standards for 2007 Model Year and Later Emergency Engines that are not Fire Pump Engines
(based on 40 CFR 89.112 and Table 2 to Subpart IIII)

Limits in grams/kW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	CO	PM
kW < 8 (HP < 11)	2007	7.5 (5.6)	8.0 (6.0)	0.80 (0.60)
	2008+			0.40 (0.30)
8 ≤ kW < 19 (11 ≤ HP < 25)	2007	7.5 (5.6)	6.6 (4.9)	0.80 (0.60)
	2008+			0.40 (0.30)
19 ≤ kW < 37 (25 ≤ HP < 50)	2007	7.5 (5.6)	5.5 (4.1)	0.60 (0.45)
	2008+			0.30 (0.22)
37 ≤ kW < 75 (50 ≤ HP < 100)	2007	7.5 (5.6)	5.0 (3.7)	0.40 (0.30)
	2008+	4.7 (3.5)		
75 ≤ kW < 130 (100 ≤ HP < 175)	2007+	4.0 (3.0)	5.0 (3.7)	0.30 (0.22)
130 ≤ kW < 300 (175 ≤ HP < 400)	2007+	4.0 (3.0)	3.5 (2.6)	0.20 (0.15)

Table D. Emission Standards for Emergency Engines that are Fire Pump Engines
(based on Table 4 to Subpart IIII)

Limits in grams/kW-hr (grams/HP-hr)

Maximum Engine Power	Model Year(s)	NMHC + NOx	CO	PM
kW < 8 (HP < 11)	2010 and earlier	10.5 (7.8)	8.0 (6.0)	1.0 (0.75)
	2011+	7.5 (5.6)		0.40 (0.30)
8 ≤ kW <19 (11 ≤ HP < 25)	2010 and earlier	9.5 (7.1)	6.6 (4.9)	0.80 (0.60)
	2011+	7.5 (5.6)		0.40 (0.30)
19 ≤ kW < 37 (25 ≤ HP < 50)	2010 and earlier	9.5 (7.1)	5.5 (4.1)	0.80 (0.60)
	2011+	7.5 (5.6)		0.30 (0.22)
37 ≤ kW < 56 (50 ≤ HP < 75)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+	4.7 (3.5)		0.40 (0.30)
56 ≤ kW < 75 (75 ≤ HP < 100)	2010 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2011+	4.7 (3.5)		0.40 (0.30)
75 ≤ kW < 130 (100 ≤ HP < 175)	2009 and earlier	10.5 (7.8)	5.0 (3.7)	0.80 (0.60)
	2010+	4.0 (3.0)		0.30 (0.22)
130 ≤ kW < 300 (175 ≤ HP < 400)	2008 and earlier	10.5 (7.8)	3.5 (2.6)	0.54 (0.40)
	2009+	4.0 (3.0)		0.20 (0.15)

Table E. Certification Requirements for Stationary Fire Pump Engine
(based on Table 3 to Subpart IIII)

Maximum Engine Power	Starting model year the engine manufacturer must certify new stationary fire pump engines
kW < 75 (HP < 100)	2011
75 ≤ kW < 130 (100 ≤ HP < 175)	2010
130 ≤ kW < 300 (175 ≤ HP < 400)	2009